



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,906	02/17/2004	Scott B. Kesler	DP-308658	8987

7590 11/02/2004

STEFAN V. CHMIELEWSKI
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: CT10C
P.O. Box 9005
Kokomo, IN 46904-9005

EXAMINER

CASTRO, ARNOLD

ART UNIT	PAPER NUMBER
----------	--------------

3747

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/779,906	Applicant(s) KESLER ET AL.
	Examiner Arnold Castro	Art Unit 3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,11 and 13-16 20 is/are rejected.
- 7) ☒ Claim(s) 3,5,10,12 and 17-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,2, 4, 8, 9, 11, 15, 16, and 20 rejected under 35 U.S.C. 102(e) as being anticipated by Fuskatsu (US 2004/0011342 A1).
3. Fuskatsu discloses an automotive ignition system including an interface for providing thermal overload protection, the interface comprising: a switching device (2) including a control terminal and a pair of output terminals, wherein the pair of output terminals are configured to provide a drive current to an inductive load responsive to a control signal on the control terminal; a temperature indicating device (7) located approximate the switching device (2), the temperature indicating device receiving a bias current and providing a temperature signal that provides an indication of a temperature of the switching device; (col 4, para. 54-56) a drive circuit (6) coupled to the control terminal of the switching device, the drive circuit providing the control signal at the control terminal of the switching device responsive to an external signal, and a thermal monitoring circuit (7) coupled across the temperature indicating device (72), the thermal monitoring circuit providing a shutdown signal to the drive circuit when the temperature

Art Unit: 3747

of the switching device is above a predetermined temperature level as indicated by the temperature signal, wherein the drive circuit responsive to the shutdown signal by removing current sources and current sinks from the control terminal of the switching device at which point leakage currents associated with the control terminal of the switching device cause the switching device to reduce the drive current to the inductive load, and, wherein the switching device is an insulated gate bipolar transistor (IGBT). Wherein the temperature indicating device includes a plurality of serially coupled diodes. See figure 4.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 3747

6. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuskatsu (US 2004/0011342 A1) in view of Pelrine et al. (US/ 6,628,040).

Fuskatsu applies as in claims 1 and 9 above disclosing an IGBT switch.

Pelrine et al. discloses that such a switch is known to be substitutable with a FET switch. See Col. 44 line 63 "switch 712, (typically a fast transistor switch such as an FET shown or an IGBT). The applicant should note that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

At the time of invention it would have been obvious to use an FET in place of the IGBT both being known to perform the same functions.

Motivation would have been to save cost.

7. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuskatsu (US 2004/0011342 A1) in view of Lorenz (US/6,777,781 B1)

Fuskatsu applies as in claims 1 and 9 however does not disclose the leakage current compensating circuit at the epitaxial region associated with the control terminal of the switching device.

Lorenz discloses such an arrangement for use in temperature sensor circuits .

At the time of invention it would have been obvious to add the leakage current compensating circuit at the epitaxial region associated with the control terminal of the switching device as taught in Lorenz into the invention of Fuskatsu.

Motivation would have been to control the switching voltage. .

Allowable Subject Matter


8. Claim 3, 5, 10, 12, 17, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold Castro whose telephone number is (703) 305-0039. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuen Henry can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Arnold Castro
Examiner
Art Unit 3747

AC